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U.S. Patent Application No. 10/787,159
Attorney Docket No. 1740-000088/US**SUBSTITUTE SPECIFICATION
(Final Version)****DESCRIPTION****HIGH-DENSITY RECORDING MEDIUM AND METHOD AND
APPARATUS FOR CONTROLLING DATA PLAYBACK THEREOF****1. Technical Field**

*O.K. to be Entered
J.N.
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[0001] The present invention relates to a high-density recording medium and a method and apparatus for controlling data playback/recording thereof, and more particularly to a high-density optical disc, such as a BD (Blu-ray Disc), and a method and apparatus for controlling data playback/recording thereof, wherein it is possible to perform a data playback/recording operation optimal to the recording capacity of the high-density optical disc.

2. Background Art

[0002] The recent rapid progress in standardization of a new high-density optical disc, for example, a BD-RE (Blu-ray Disc-Rewritable), capable of recording high-quality video data and high-quality audio data for a lengthy period of time has led to anticipation that the associated products will be developed and commercially available.

[0003] The BD-RE has, as shown in Fig. 1, a clamping area, transition area, burst cutting area (BCA) and lead-in area defined sequentially at the inner periphery thereof, and a data area and lead-out area defined respectively at the intermediate portion and outer periphery thereof.

[0004] The lead-in area is partitioned into a first protection zone Protection zone 1, a PIC (Permanent Information & Control data) zone, a second protection zone Protection zone 2, an information 2 zone Info 2, an optimum power control (OPC) zone, etc. Whereas the first protection zone and PIC zone are pre-recorded areas where data is pre-recorded in advance, the